Georg Neumann GmbH | Berlin

Neumann-Information 88 043 April 1988

Re: Disassembling and Cleaning of Neumann Condenser Microphones

The disassembling of the microphones in amplifiers and capsule head is described in the operating instructions which are delivered with each microphone.

Attention:

It is by no means allowed to touch with the finger the contact and isolating elements for the connection of the capsule head. Also the other high impedance parts of the circuit may not be touched. Already minimum grease and dirt quantities can diminish the isolation figures and cause noise voltages.

Cleaning the microphone amplifier:

Existing dirt on components and contacts can be removed by means of a soft brush using a detergent on the basis of Freon, Kaltron or Frigen.

Microphone capsules:

The microphone capsules of U 89 i, TLM 170 i and the KM ... miniature microphones are constructed in a way that the total surface is connected to 0 Volt. For this reason these microphones are extremely insensitive against dirt and atmospheric influences and should not be cleaned.

When microphone capsules had to be constructed in a way that the isolating areas between the electrodes could be reached by dirt (the large double membrane systems of U 67, U 87 (A) i, SM 69, SM 69 fet, USM 69 i, U 47 fet) after a long period of operation noise voltages may occur. For cleaning the membranes the capsule has to be removed from its protecting grille. At the U 67, U 87 (A) i, U 47 fet microphones the 3 mounting screws at the lower plate of the capsule head have to be removed and then the complete capsule assembly can be removed from the capsule head.

At the microphones SM 69, SM 69 fet, USM 69 i the disassembly of the protecting grille is more difficult:
The black dot on the upper part of the grille (position 0^{o}) has to be removed. Behind the opening a spring is visible, this spring has to be pressed back by approximately 1 mm, the grille can then slightly be lifted at the front side. Now the grille has to be turned by 180^{o}, then another spring becomes visible which has also to be pressed backward, now the complete upper part of the grille can carefully be removed. To prevent the springs to be lost these should also be removed. The complete capsule assembly can now easily be removed from the lower part of the grillle.

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Printed in Germany

Cleaning the membrane:

Every membrane is carefully brushed with a very soft brush with distilled water. The water with the dissolved dirt can then be removed with very soft blotting-paper. This procedure has to be repeated several times until the capsule is really clean. Those capsules which cannot be cleaned by this method have to be exchanged.

Cleaning the membrane by means of solvents is not allowed:
These solvents are too thinly liquid and fugitive.
For careful cleaning then no time remains and inhomogenitives may remain on the membrane;
solvents could also transport dirt below the membrane fixing rings:
solvents can also cool down the membrane strongly and then humidity can condense below the membrane which cannot be removed from there.
Besides that the use of solvents bears the risk that the mechanical tension of the membrane is influenced.